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Patent Office



6.10  
11/09

**To Whom It May Concern**

The Chief of the Patent Office certifies that **WAEL MOHAMED NABIL LOTFEY**  
Address : 43 GIZA ST.- GIZA - ARAB REPUBLIC OF EGYPT  
has filed application No.946 on 24\09\2003 to obtain a patent for an invention titled :  
**LINED BALLOON MOUNTED STENT**

This Document was given to him upon his request,  
Dated 20\12\2003 Coupon No. 987578

REC'D 07 JAN 2004

WIPO PCT

Hisham Eldeeb

Patent Office Supervisor  
Dr. Hisham Ezzat El Dib

Elrefaei Dec 29, 2003  
Prof. Dr. Fawzi A. Elrefaei  
President,  
Academy of Scientific  
Research and Technology

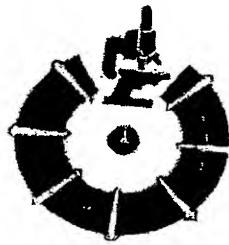


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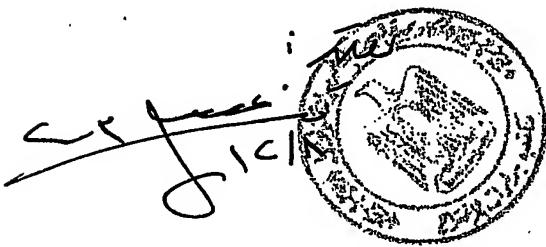
This is translation for application No. 0946\2003 filed on 07/12/2003

#### (4) The detailed description

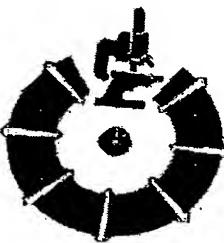
##### (4/1) The previous art:

- 1- A surgery is a must to replace the damaged valve with a sound human, animal or steel valve.
- 2- The animal valve is fixed via a catheter.

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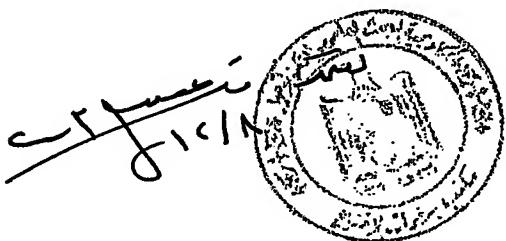


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(4/2) The problem or deficiency with the previous art:

- 1- The surgery has many problems and dangers besides its high cost.
- 2- The valve lacks to flexibility after being fixed.
- 3- The cost of the valve itself is very high.



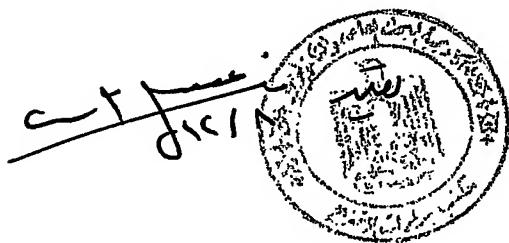
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(4/3) The new with the invention:

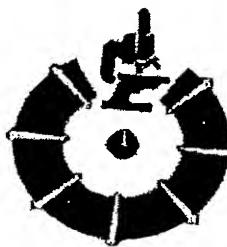
- 1- The interventional catheter realizes the same results of the surgery.
- 2- The valve can be treated before and after the surgery.
- 3- The interventional catheter avoids the problems and dangers of the surgery.



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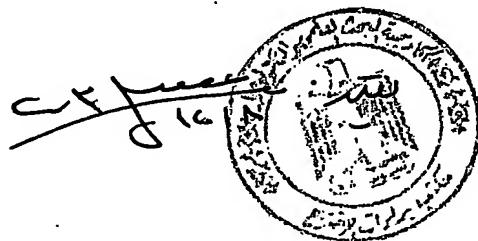
بيان اختراع  
ستوديو مصر

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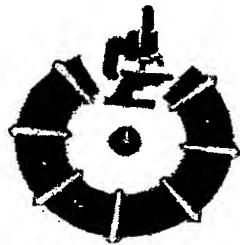
(4/4) The detailed description:

The valved balloon stent of this invention is inserted via the intervention catheter to carry out the functions of the valve inside the heart. The stent is inserted with its small size and then it is inflated to take the size of the blood vessel. The balloon which carries out the functions of the valve is dilated with convenient substance such as carbon dioxide or salt solution. In addition to the described balloon, the stent could be lined with a balloon to control the main opening diameter. To make it clear, this invention could be resemble to a ball and cadge fixed on a dilatable stent wherein the stent has an opening at one side and on the other side a cadge that has a inflatable ball inside it.



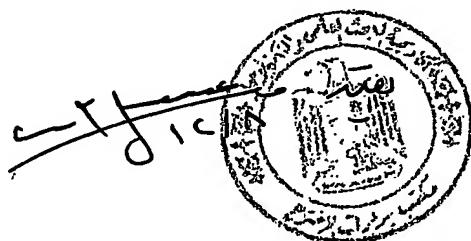
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(4/5) The method of exploitation:

This invention is concerned with making a new valved balloon stent after being modified.

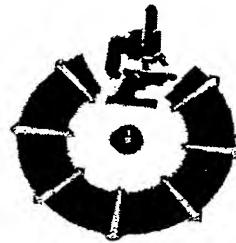


المنسق

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مشروع مصر

Ministry of State for Scientific Research  
Academy of Scientific Research & Technology  
Technology Development & Scientific Sector

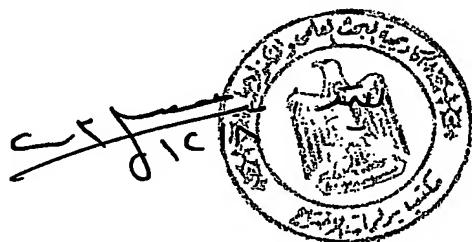
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أكاديمية البحث العلمي والتكنولوجيا  
قطاع التنمية التكنولوجية والخدمات العلمية  
مكتب براءات الاختراع

### (5) Claims

- 1- Adding a narrowing lining to the stent which could be dilated inside the balloon and then inflated from outside to inside the stent. The lining moves inside the stent to carry out the functions of the valve.



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